1. A timing element comprising a delay composition in a sheath, wherein the delay composition comprises a reactive polymeric material.

2. The timing element of claim 1 wherein the delay composition comprises a GAP material.

3. The timing element of claim 2 comprising a cross-linked GAP acrylic material.

4. The timing element of claim 3 comprising a cross-linked GAP urethane material.

5. The timing element of any one of claims 2 wherein the delay composition further comprises a pulverulent oxidizer material.

6. The timing element of claim 5 wherein the oxidizer material comprises about 0.25% to about 10% of the delay composition, by weight.

7. The timing element of claim 2 or claim 5 wherein the delay composition further comprises a pulverulent fuel, in an amount of about 0.25 to about 2%, by weight.

8. The timing element of claim 3 wherein the pulverulent fuel comprises about 1 percent of the delay composition, by weight.

9. The timing element of claim 1 or claim 2 wherein the sheath comprises polyacrylonitriles, polybutadiene, polystyrene, ABS copolymer, polyphenylene oxide, polysulfone, cellulose acetate butyrate, or a modified ethylene acrylate polymeric material, or a combination comprising any of the foregoing.

10. A method for making a timing element, comprising disposing a curable reactive material precursor in a sheath, and then cross-linking the curable reactive material precursor resin to form a reactive polymeric material in the sleeve.

11. The method of claim 10 wherein the sleeve comprises a polymeric material, the method comprising injecting curable reactive material precursor resin into a sleeve under pressure sufficient to expand the diameter of the sleeve by about 0.4% to about 1.2%.

12. The method of claim 10 wherein the curable reactive material precursor resin comprises a GAP resin and a cross-linking agent.

13. The method of claim 12 wherein the curable reactive material precursor resin further comprises a pulverulent oxidizing material, a pulverulent fuel, or both.

14. The method of claim 13 comprising an oxidizing material in an amount of about 0.25% to about 2% of the delay composition, by weight.

15. The method of claim 13 comprising a fuel in an amount of about 0.25 to about 2% of the delay composition, by weight.

16. The method of claim 10 wherein the curable reactive material precursor resin comprises at least about 20% DPEHA.

17. The method of claim 16 wherein the curable reactive material precursor resin comprises at least about 20% to about 40% DPEHA.

18. The method of claim 17 wherein the curable reactive material precursor resin comprises at least about 29% DPEHA.

19. An initiator comprising:

a shell having a closed end and an opening for a signal transmission tube;

an output charge in the closed end of the shell;

a signal transmission fuse secured in the opening; and

a timing element in the shell situated to be initiated by the fuse and to initiate the output charge,

wherein the timing element comprises a reactive polymeric material.

20. The initiator of claim 19 wherein the timing element comprises a reactive polymeric material in a sleeve.

21. The initiator of claim 19 or claim 20 wherein the reactive polymeric material comprises a GAP material.

22. A method for making a delay initiator, comprising disposing an output charge in an initiator shell, depositing a curable reactive material precursor resin into the initiator shell, cross-linking the curable reactive material precursor resin in the shell and securing an initiation means in the shell in initiating relationship with the delay composition.

23. The method of claim 22 wherein the curable reactive material precursor resin comprises a GAP resin and a multi-functional dipolarophile cross-linking agent.

24. The method of claim 23 wherein the initiation means comprises a shock tube.

25. A method for making a delay initiator, comprising disposing an output charge in an initiator shell, cooling a timing element comprising a cross-linked reactive polymeric material to a size that facilitates insertion of the timing element into the shell, inserting the cooled timing element into the shell, securing a signal transmission tube in the shell in initiating relationship with the timing element, and permitting the timing element to warm to ambient temperature so that it expands to engage the interior surface of the shell.

26. The method of claim 25 wherein the initiation means comprises an SCB.

27. A timing element comprising a segment of reactive polymeric material having a length of about 0.635 cm to about 10 cm and a diameter of about 0.0625 cm to about 0.635 cm.